

7. [6 points] Determine whether the following series converges or diverges. Be sure to fully justify your answer, showing all work and indicating any theorems you use.

$$\sum_{n=1}^{\infty} \frac{(n-1)(\cos^2(n))}{7n^6 + 2n^4 + n}$$

Answer (*Circle one*):

Diverges

Converges

Justification: